What is claimed is:

1. A transmission for a motor vehicle, said transmission comprising: a plurality of sets of gears defining transmission ratio steps, wherein each set of gears includes a first gear non-rotatably connected with a first shaft and an idler gear connected with a second shaft, whereby transmission ratio steps are engaged by connecting an idler gear with a first gear by means of a final output element that is part of a final output mechanism and that is actuated by the final output mechanism, with a shaft bearing said element, and whereby a shift sequence of the transmission ratio steps is not established in the final actuation mechanism.

2. A transmission according to claim 1, in which the final actuation mechanism includes at least one primary actuation element, such as shift fingers, which enters into an operative connection with the final output mechanisms such that a transmission ratio step is engageable using a first final output mechanism and the at least one primary actuation element then can enter into operative connection with another final output mechanism without having to disengage previously engaged transmission ratio step, wherein the final actuation mechanism includes at least one secondary actuation mechanism.

3. A transmission according to claim 2, wherein as soon as the at least one primary actuation element enters into interaction with a final output mechanism, the at least one secondary actuation element can enter into interaction with at least one further final output mechanism.

4. A transmission according to claim 3, wherein the at least one further final output mechanism is associated with a still engaged transmission ratio step.

5. A transmission according to claim 3, wherein upon actuation of a final output mechanism for engaging a transmission ratio step using the at least one primary actuation element, at the same time at least one additional final output mechanism is actuated using at least the one secondary actuation element for disengaging the associated transmission ratio steps.

6. A transmission according to claim 3, wherein, when one gear is engaged, at least one gear not engaged is prevented from an unintended engagement using the at least one secondary actuation element if the primary actuation element of the engaged gear remains in the region of an end position, which establishes the engagement of the gear.

7. A transmission according to claim 2, wherein only one transmission ratio step is engageable at a time through the at least one primary actuation element.

8. A transmission according to claim 2, in which the transmission ratio steps form groups between which a tractive force interruption-free change can take place, wherein as soon as the at least one primary actuation element enters into operative connection with the final output mechanism of a group, the at least one secondary

actuation element can enter into operative connection with at least one further final output mechanism of the same group.

9. A transmission according to claim 8, wherein the at least one further final output mechanism of the same group is associated with a still engaged transmission ratio step.

10. A transmission according to claim 8, wherein when one final output mechanism of a group is actuated for engaging a transmission ratio step using the at least one primary actuation element, at the same time at least one further final output mechanism of the same group is actuated using the at least one secondary actuation element for disengaging the associated transmission ratio steps.

11. A transmission according to claim 8, wherein as soon as the at least one primary actuation element enters into operative connection with a final output mechanism of a group, the at least one secondary actuation element enters into operative connection with no final actuation mechanism of the other group.

12. A transmission according to claim 8, wherein in any given case, when one gear of a group is engaged, at least one gear of this group which is not engaged is prevented from an unintended engagement using the at least one secondary actuation element if the primary actuation element of the engaged gear of this group remains in the region of the end position which fixes the engagement of this gear.

13. A transmission according to claim 8, wherein in any given case only one transmission ratio step is engageable at a time in each group.

14. A transmission according to claim 2, wherein the at least one primary actuation element is rotatable with restriction in relation to the at least one secondary actuation element against the action of an energy storage unit.

15. A transmission according to claim 3, wherein when a final output mechanism is actuated, the synchronization of an idler gear of a newly to be engaged transmission ratio step begins using the at least one primary actuation element before at least one further final output mechanism is actuated using the at least one secondary actuation element for disengaging the associated transmission ratio steps.

16. A transmission according to claim 15, wherein using the at least one secondary actuation element, the disengagement of the associated transmission ratio step takes place before the synchronization of the one idler gear is ended and the engagement of the newly to be engaged transmission ratio step takes place using the primary actuation element.

17. A transmission according to claim 16, wherein when one gear is engaged, at least one gear not engaged is prevented from an unintended engagement using the at least one secondary actuation element if the primary actuation element of

the engaged gear remains in the region of the end position, which fixes the engagement of the gear.

18. A transmission according to claim 16, wherein the motion of the primary actuation element for engaging the newly to be engaged transmission ratio step is prevented by a blocking device controlled by the secondary actuation element, whereby the secondary actuation element blocks the blockage device until the engaged transmission ratio step is disengaged.

19. A transmission according to claim 2, wherein the final output mechanisms include connection elements, such as shift forks or selector shafts and forks, which have a first functional area for the engagement of a primary actuation element and a second functional element for the engagement of a secondary actuation element.

20. A transmission according to claim 19, in which the at least one secondary actuation element is arranged on a selector shaft rotatable about its longitudinal axis when actuated, and in which the second functional area is constructed such that when the selector shaft is rotated, a force from one secondary actuation element can be transferred to the second functional are in the direction of disengagement of the associated transmission ratio step, which is equal to or greater than the force necessary for disengagement.

21. A transmission according to claim 2, wherein at least one actuation element can be brought into operative connection with one or more final output mechanisms at the same time.

22. A transmission according to claim 21, wherein the at least one secondary actuation element has a breadth in the direction of the selector shaft so that at least two final output mechanisms can be acted upon at the same time.

23. A transmission according to claim 2, wherein the at least one secondary actuation element and the second functional areas interact such that a disengagement of a transmission ratio step takes place when the selector shaft rotates, independent of the direction of rotation of the latter.

24. A transmission in accordance with claim 23, wherein the at least one secondary actuation element and the second functional regions are constructed symmetrically with relation to a plane erected on the selector shaft.

25. A transmission according to claim 23, wherein the at least one secondary actuation element has two cam-like end regions and the second functional regions have recesses corresponding therewith.

26. A transmission according to claim 23, wherein the second functional regions have two cam-like end regions and the at least one secondary actuation

element has recesses corresponding therewith.

27. A transmission according to claim 23, wherein the force transmission between secondary actuation element and the second functional area takes place via the tips of cam-like end regions.

28. A transmission according to claim 23, wherein the transmission of force between secondary actuation element and the second functional region takes place via the lateral surfaces of the cam-like end regions.

29. A transmission according to claim 1, wherein the at least one transmission actuator unit formed from a shift actuator and a selection actuator with a final actuation mechanism as separate subassembly can be mounted on a pre-assembled transmission comprising an opening for access of the final actuation mechanism to at least one final output mechanism.

30. A transmission according to claim 1, wherein a transmission actuation unit comprised of a manually actuated selector element and a manually actuated shift element with a with a final actuation mechanism as a separate subassembly can be mounted on a pre-assembled transmission comprising an opening for access of the final actuation mechanism to at least one final output mechanism.

31. A transmission according to claim 29, wherein the same opening is

utilized for the transmission actuator unit and for the transmission actuation unit.

32. A transmission according to claim 29, wherein the transmission actuator unit and the transmission actuation unit use the same final output mechanisms for engaging and disengaging transmission ratio steps.

33. A transmission according to claim 23, wherein the final actuation mechanism is comprised of a primary actuation element, which engages basically free of play into the at least one final output element while forming an involute engagement and actuates said element.

34. A transmission according to claim 29, wherein the final actuation mechanism is comprised of a primary actuation element, which engages without play into the at least one final output mechanism and actuates it.

35. A transmission according to claim 34, wherein the play-free intervention is an involute engagement.

36. A transmission according to claim 2, wherein the at least one primary and/or secondary actuation element interacts with at least one final output element while forming an involute engagement.

37. A transmission according to claim 2, wherein the at least one primary and one secondary actuation element are one piece.

38. A transmission according to claim 37, wherein at least one primary actuation element is enclosed along its axis of rotation by two secondary actuation elements and in that primary and secondary actuation elements are constructed in one piece.

39. A transmission according to claim 37, wherein at least one of the primary or secondary actuation elements is one piece with the selector shaft accommodating these.

40. A transmission according to claim 26, wherein the at least one primary actuation element and at least one secondary actuation element exert an involute engagement on a single shift jaw, whereby for the at least one primary actuation element and for the at least one secondary actuation element a separate involute region is provided in each case.

41. A transmission according to claim 1, wherein the engagement of one transmission ratio step takes place according to a linear path relationship between final output element and primary actuation element.

42. A transmission according to claim 1, wherein the engagement of a

transmission ratio step takes place in accordance with a non-linear path relationship between final output element and primary actuation element.

43. A transmission according to claim 1, wherein the disengagement of a transmission ratio step takes place according to a linear relationship between final output element and secondary actuation element.

44. A transmission according to claim 1, wherein the disengagement of a transmission ratio step takes place in accordance with a non-linear path relationship between final output element and secondary actuation element.

45. A transmission according to claim 1, wherein an engagement motion of a transmission ratio step to be engaged and a disengagement motion of a transmission ratio step to be disengaged overlap.

46. A transmission according to claim 1, wherein an engagement motion of a transmission ratio step to be engaged and a disengagement motion of a transmission ratio step to be disengaged do not overlap.

47. A transmission according to claim 1, wherein a selection motion for positioning the at least one primary actuation mechanism on an end output mechanism is a displacement of it along an axis of rotation and a shifting motion is a rotary notion of the at least one primary actuation element about this axis of rotation.

48. A transmission according to claim 1, wherein a selection motion for positioning the at least one primary actuation element on an final output mechanism takes place by means of a rotary motion about an axis of rotation and a shifting motion by means of a displacement along this axis of rotation.

49. A transmission according to claim 48, wherein a final actuation mechanism is constructed such that a hollow shaft rotatable about an axis of rotation has at least one radially outwardly projecting primary actuation element, and that in the hollow shaft a forced control penetrating through slots in the hollow shaft is provided for two secondary actuation elements arranged on the hollow shaft with radially extended impingement facilities for the final output elements, which arranges the secondary actuation elements during a displacement of the hollow shaft along the axis of rotation at a limited distance from one another, whereby the final output mechanisms are arranged across at least one peripheral segment around the axis of rotation of the hollow shaft, and in a first displacement of the hollow shaft within the limited distance, the secondary actuation elements disengage an engaged gear, and with a further displacement of the hollow shaft beyond the limited distance the at least one primary actuation element engages a newly to be engaged gear, after the at least one primary actuation element and the final output mechanism were brought into the same peripheral position for the new gear to be engaged by means of a rotation of the hollow shaft.

50. A transmission according to claim 49, wherein two primary actuation elements are arranged across the periphery and activate a group of final output mechanisms in any given case.

51. A transmission according to claim 49, wherein long slots are provided in the secondary actuation elements along which the primary actuation elements are guided upon a displacement of the hollow shaft.

52. A transmission according to claim 48, wherein both secondary actuation elements is pre-stressed.

53. A transmission according to claim 2, wherein in the transmission, at least one transmission brake is provided for braking a transmission input shaft, which is actuated using a primary or secondary actuation element.

54. A transmission according to claim 1, wherein the final output element forms two groups with a distance regarded along an axis of rotation of their direction of action.

55. A transmission according to claim 1, wherein at least one final output element is tapered from radially inward to radially outward in an area of an operating engagement with at least one primary and/or secondary actuation element in relation to the axis of rotation of the at least one primary and/or secondary actuation element

rotating during a shift process.

56. A transmission according to claim 1, wherein, independently of the position of the final output elements, the at least one primary actuation element can be brought into the neutral position (N) in which all engaged gears are disengaged through the at least one secondary actuation element.

57. A transmission in accordance with claim 56, wherein the neutral position is reached by means of a selection motion of the at least one primary actuation element beyond the final output elements and a subsequent shifting motion.

58. A transmission according to claim 56, wherein the neutral position (N) is provided in a final output mechanism, which actuates only one gear, and the shifting motion for setting the neutral position takes place opposite to the shifting motion for actuation of the final output element shifted by the latter.

59. A transmission according to claim 56, wherein the neutral position is reached using a selection motion of the primary actuation element between two final output elements and a subsequent shifting motion.

60. A transmission according to claim 1, wherein a selection process fixing a final output mechanism for a newly to be engaged transmission ratio step takes place immediately before disengaging an engaged transmission ratio step and engaging a

newly to be engaged transmission ratio step during a reduction phase of a drive torque furnished by a drive unit in a power branch of the motor vehicle.

61. A transmission according to claim 1, wherein the transmission includes at least two power branches with one transmission shaft, respectively, and idler gears rotating thereupon, which are connectable with the transmission input shaft using the final output mechanisms for shifting gears, whereby during the operation of the motor vehicle using a first transmission input shaft and a shifted gear corresponding to the driving situation on the second transmission input shaft, a likely following gear is engaged with a transmission ratio step fitting the driving situation.

62. A transmission according to claim 61, wherein the like following transmission ratio step is the next higher transmission ratio step in relation to the reduction engaged on the first transmission input shaft.

63. A transmission according to claim 61, wherein, during a standstill of the vehicle, a transmission ratio step is engaged on each of the transmission input shafts by means of which the motor vehicle can be started.

64. A transmission according to claim 63, wherein a transmission ratio step with which the motor vehicle can be started up is a reverse gear or a forward gear.

65. A transmission according to claim 61, wherein when the driving situation

changes, the likely following transmission ratio step is changed.

66. A transmission according to claim 61, wherein, corresponding to the driving situation, a final output mechanism is selected using a primary actuation element, but is not actuated, which corresponds to the transmission ratio step alternative of the likely following transmission ratio step.

67. A transmission according to claim 56, wherein the alternative transmission ratio step corresponds to a transmission ratio step with greater reduction during a partial load operation of the motor vehicle than that with which the motor vehicle is being operated at this time, whereby with this greater reduction in full load operation, the maximal acceleration of the motor vehicle can be attained.

68. A transmission according to claim 66, wherein the alternative transmission ratio step at a full load operation of the motor vehicle corresponds to a transmission ratio step with smaller reduction than that with which the motor vehicle is being operated at this point in time, whereby with this smaller reduction, the motor vehicle is operable in an especially economical partial load operation.

69. A transmission according to claim 60, wherein after a selection of the final output element, the primary and/or secondary actuation element acts upon at least one final output element of a transmission ratio step to be disengaged in such manner that a disengagement process of this transmission ratio step to be disengaged

only takes place when a torque on the final output element connecting the idler gear with a transmission shaft is near zero.